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Message From the Director

BG Robert W. Cone, USA
Director, JCLL

Things have continued to be very busy in the Joint Center for Lessons Learned (JCLL) over the past couple of months. We have had teams deployed to many areas of the world in support of the Global War on Terrorism (GWOT) and Operation IRAQI FREEDOM (OIF). Even as this article is being written, a team is returning from overseas to Suffolk, Virginia, in order to gather their inputs and begin writing the various reports that will capture the successes and challenges they observed.

Further, the classified Major Combat Operations (MCO) report has been approved and published, and the unclassified MCO report is in final review and will be published shortly. Finally, the outline for the restructuring of the Joint Lessons Learned Program continues on track and is being briefed to senior military and civilian officials. Future issues of the JCLL Bulletin will focus on these changes and the lessons from GWOT and OIF.

In this issue of the Bulletin we present four articles on various topics. The first article, ***Joint Special Operations Task Force (JSOTF) Planning Factors***, by LTC Wade Owens, US Army, identifies and highlights key planning factors for consideration by the JSOTF staff. He then makes recommendations on how to best implement these planning elements to increase effectiveness within the staff planning process.

Joint Special Operations and the National Guard, …Transforming the Future, discusses the role of the National Guard Special Operations Detachment as a force multiplier in joint operations. LTC Pat Stevens, Army National Guard, discusses the impact the National Guard has in the transformation to a fully integrated multiservice, multiagency force.

LTC Brad Bloom, US Army, presents our third article dealing with ***Information Management: Minimizing the Digital Fog of War***. LTC Bloom discusses issues involved in both the physical and virtual aspects of information management.

The final article, ***The Need for a Uniform Collaboration Tool Standard***, describes various collaboration tools currently being used, and makes recommendations for standardization and interoperability. Major Robert Nash, US Marine Corps, and SGM Ken Teske, US Army, discuss the tools and their limitations to achieving interoperability among the Services and Department of Defense agencies.

ROBERT W. CONE
Brigadier General, U.S. Army
Director, Joint Center for Lessons Learned

JCLL UPDATE

Mr. Mike Barker

First, the news everyone has been waiting for. The Major Combat Operations (MCO) Quicklook Report was approved by US Central Command (CENTCOM) and signed out by ADM Giambastiani, Commander US Joint Forces Command (JFCOM), on 1 March 2004. The report, which is classified SECRET/NOFORN, can be found on the Joint Center for Lessons Learned (JCLL) web site: www.jwfc.jfcom.smil.mil/jcll. Once you are on the web site, click on Operation ENDURING FREEDOM/Operation IRAQI FREEDOM (OEF/OIF) reports. You will see "JLL OIF MCO Report (01 Mar 2004)." An unclassified version of this report is in final review and will be released in the next several weeks. The unclassified version will also become the focus of a future Bulletin. Further, there are two additional reports being drafted. They are the Post Major Combat Operations (PMCO) report and the Iraqi Perspective Program. As of this writing, an estimated release date is not available for either of these reports. Once approved for release and signed, the reports will be posted to the JCLL website following the above link.

The operations tempo (OPSTEMPO) of our active collection teams remains high. We have one team still collecting information on Operation IRAQI FREEDOM as part of the post major combat operations. This team has collectors located in both Baghdad and Qatar. In addition to this team, we have eight other teams deployed collecting against the Global War on Terrorism (GWOT). These teams are currently located at CENTCOM, Special Operations Command (SOCOM), European Command (EUCOM), Pacific Command (PACOM), Northern Command (NORTHCOM), Strategic Command (STRATCOM), Afghanistan/Horn of Africa, and Washington, DC. The GWOT teams are collecting observations and findings in much the same manner as our original OIF collection team. The GWOT teams deployed around 1 February and are scheduled to redeploy back to JFCOM around 1 April. Once back at JFCOM, they will start drafting their first GWOT report.

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Many of you have asked about when the new lessons learned instruction would be signed and released later this year. That project is now in full swing. The Joint Staff J7 and the JCLL will jointly write the new Chairman of the Joint Chiefs of Staff Instruction (CJCSI) for Lessons Learned. One of the major changes you will see is that the Commander, USJFCOM is now responsible for executing this program, where the current instruction identifies the Commander, Joint Warfighting Center as having this responsibility. Our main challenge in rewriting the CJCSI is to keep what was good with the legacy lessons learned program while institutionalizing the current lessons learned efforts. This will be done in order to develop a vibrant, synergistic system that networks all lessons learned organizations and efforts, informs the warfighter in the current fight, and accommodates future transformation efforts. The outline of the proposed changes is currently being briefed to several functional and combatant commands and Services. The intent is to ensure we have initial agreement in format and substance before "putting pen to paper."

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As we look out over the next 4 quarters for the JCLL Bulletin's focus, the developing topics are the Standing Joint Force Headquarters, the Coast Guard and Homeland Security, the "new" JCLL (to include excerpts from the Operation IRAQI FREEDOM Major Combat Operations (MCO) Report), and a Coalition Perspective of the Combined Joint Task Force. If any reader has a special interest in any of these topics, you are invited to submit an article (4-6 pages) on that subject.

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"No man's personal experiences can be so valuable as the compared and collated experiences of many men."

Maurice

Contents

Joint Special Operations Task Force (JSOTF) Planning Fundamentals

LTC Wade Owens, US Army

Joint planning processes and procedures are the subject of several joint publications and are taught to officers of all services during Joint Professional Military Education (JPME) phases I and II. These processes and procedures follow a logical sequence and provide a useful framework for joint special operations force (SOF) planners. However, in practice joint SOF planning efforts seldom resemble the orderly process described in doctrine. More often, joint SOF planning efforts are chaotic, somewhat disjointed, and initially very inefficient. Naturally, there are several reasons for these disappointing characteristics, but the primary explanation is attributed to JSOTF planning often being done by ad-hoc organizations in a dynamic, complex, and time-sensitive environment that cannot be realistically reflected in joint publications. To plan effectively in this environment, JSOTF commanders and staffs must tailor their organizations and procedures to adapt to specific requirements.

The focus of this article is not to review joint doctrine, but to identify and highlight the fundamental elements essential for successful joint planning, and provide recommendations for their implementation. These elements, derived from observations and lessons learned from multiple exercises and operations are: 1) organize for efficient planning, 2) train planners to use and adapt the planning process, 3) obtain planning guidance, and 4) communicate and manage plans information.

Organize for Efficient Planning

The JSOTF commander has several options for organizing for planning. He can divide the responsibility for planning between the J35 (future operations) and J5 (plans) (see Figure 1), or he can make one planning organization responsible for both future operations and plans (see Figure 2).

Either option has advantages and disadvantages that are beyond the scope of this article. Regardless of the option chosen, the planning tasks listed in the diagrams above must be accomplished. Identifying planning tasks and assigning responsibility for accomplishment of these tasks is the first step towards establishing an effective JSOTF planning organization.

The two key planning organizations in the JSOTF are the core planning cell, often called the J35, and the joint planning group (JPG). The organization and functions of the J35 and the JPG are often misunderstood and will be discussed below.

The J35 is the JSOTF J3's full-time planning element. This organization is responsible for planning both future operations and, in some cases, plans. The J35 director (plans chief) is normally subordinate to the joint operations center (JOC) chief (J3) (see Figure 3).

It is the JOC chief/J3's responsibility to ensure the J35 and current operations section (J33) are synchronized.

Figure 4 shows a recommended J35 organization. In this organization the chief of future operations is primarily focused on determining JSOTF planning requirements and coordination with external units (joint

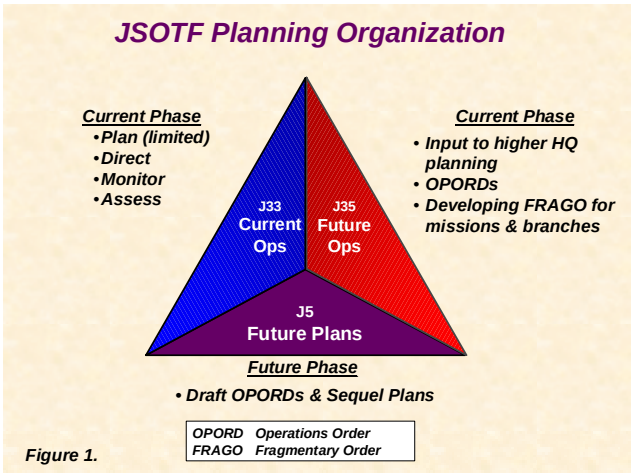
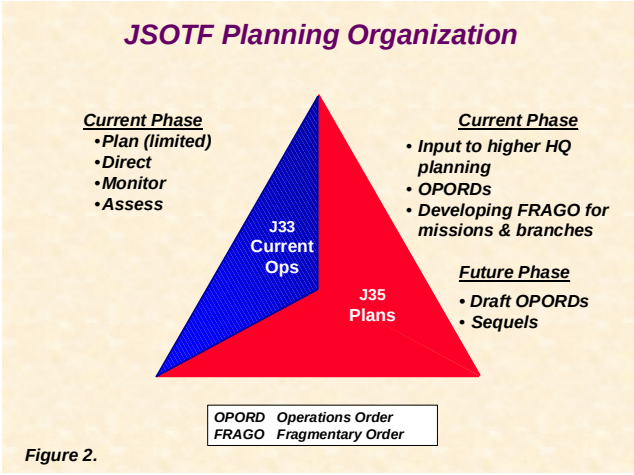


Figure 1.



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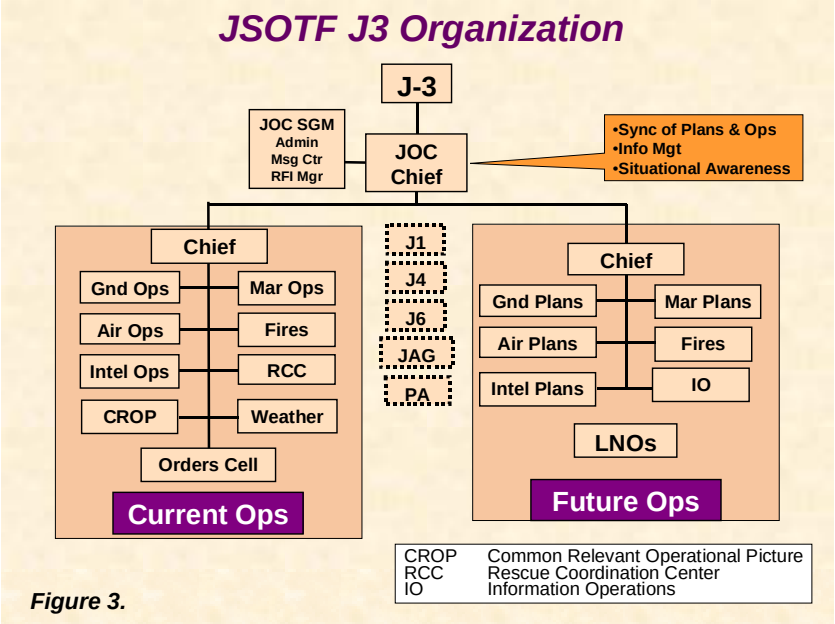


Figure 3.

These are the individuals who will lead the detailed planning effort for missions during the execution phase of operations. Lead planners must have a clear understanding of the planning process, the products required, and the ability to lead small teams of planners through this process to the end state.

The second essential planning organization is the joint planning group (JPG). The JPG includes the J35 core planners discussed already and representatives from other JSOTF staff directorates, components, and interagency LNO. The JPG facilitates staff synchronization without increasing manning requirements on other staff directorates, or creating a large and potentially inefficient core planning organization. These staff and unit representatives provide subject matter expertise required during key phases of the planning process. JPG members also ensure planning requirements are communicated and synchronized with their parent staff section or unit. This functional expertise is critical particularly during initial feasibility assessments and course of action development. During these phases of planning, JPG members evaluate the feasibility of plans from a functional perspective. Failing to get this input can result in wasted time and energy devoted to plans that are unsupportable from a logistics or other functional

task force (JTF) and JSOTF components). In other words, his focus is primarily "up and out" of the future operations section. This involves getting planning guidance from the commander and J3, and communicating with staff counter parts and liaison officers (LNO) at the JTF and JSOTF component headquarters (HQ) to determine emerging support/ future planning requirements. The deputy and the noncommissioned officer in charge (NCOIC), on the other hand, focus internally, managing time and information, and ensuring that planning products are produced on schedule. This includes monitoring suspenses, preparing briefings, reviewing planning products, and ensuring mission folders and other planning information are updated and filed in accordance with the information management plan.

The air, ground, maritime, intelligence, information operations (IO), and fires planners provide their subject matter expertise to the planning process, maintain visibility of assets available for tasking, prepare required planning products, and coordinate plans with supported and supporting components. Besides serving as subject matter experts (SME) for their particular functional area, they can also serve as lead planners. Competent and efficient lead planners are a critical component of any effective planning organization.

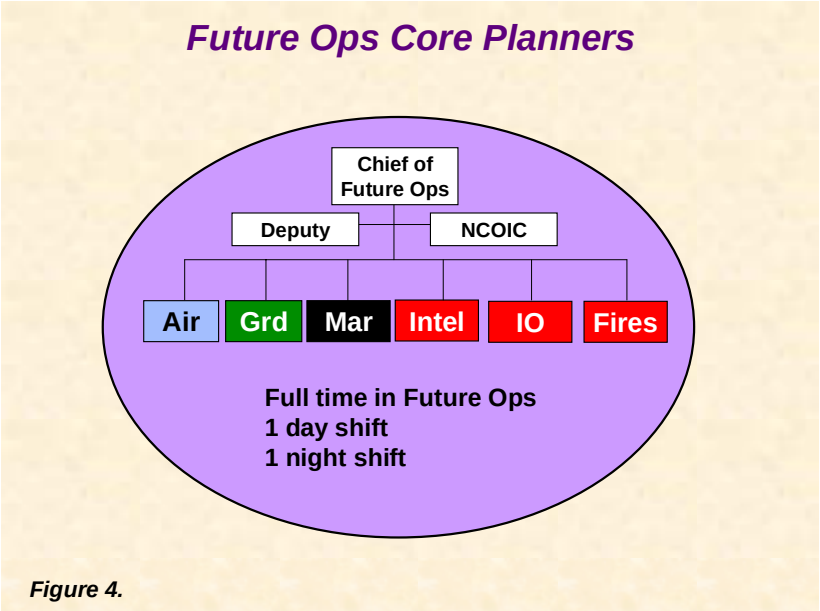


Figure 4.

standpoint. The JPG meets as required, usually daily, and also when a new mission planning requirement emerges.

Figure 5 shows an example JPG structure. Members of the JPG should be assigned for the life cycle of the JSOTF, if possible, so they become trained and familiar with the planning process and unit standard operating procedures (SOP). JPG members should also be knowledgeable and trusted members of their particular section who can make decisions on behalf of their staff director or unit commander.

The preceding paragraphs describe the recommended composition for a J35 section and a JPG that contain all of the necessary expertise to perform required planning tasks. However, in reality, most JSOTF planning elements are neither adequately manned nor properly organized to perform the required planning functions. The mission focus and special skills required by a war fighting JSOTF often exceed the capability of organic personnel in the organizations that form them. These organizations, typically theater special operations commands (TSOC), Army special forces group HQ, and Navy special warfare task group HQ, do not possess sufficient numbers of personnel and lack specific operational level skill sets to operate for extended periods in a high-tempo joint environment. As a result, these organizations rely on augmentees from a variety of sources to provide required expertise and fill personnel shortfalls. Training and integrating augmentees into the planning staff is critical to the success of the JSOTF planning team.

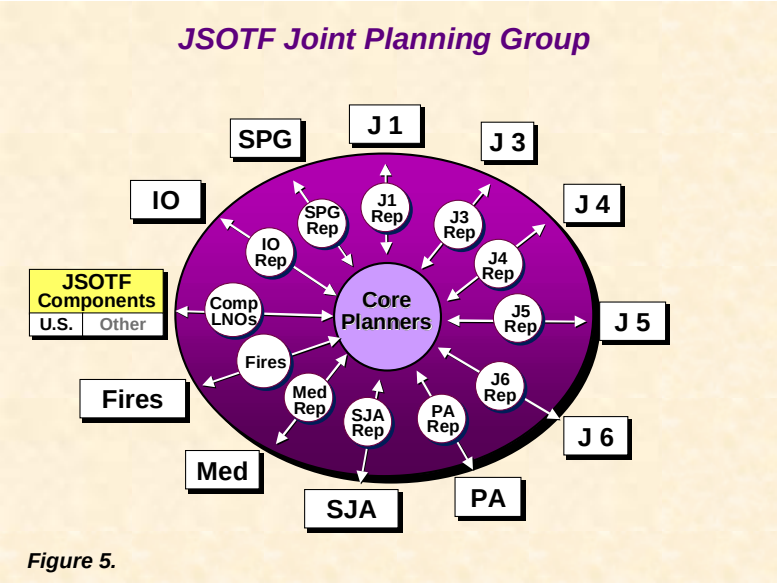


Figure 5.

Train Planners

Training planners to perform their required duties seems obvious, but in practice is difficult to accomplish due to the availability of personnel and the nature of most joint exercises. Most joint exercises are short in duration and are planned well in advance of execution. As a result, the execution phase of these exercises focuses primarily on current operations and does not emphasize the importance of a robust planning element during crisis action planning. As already noted, the ad-hoc nature of most JSOTF staffs exacerbates the problem. Many of the required personnel will come from outside the core organization. They often arrive well after the JSOTF is established and have no habitual relationship with the core organization. Further, these personnel may not possess the education and/or experience required to become immediately productive members of the team. While training and integration of these staff augmentees is essential to effective planning, it is usually very difficult to set aside training time for new personnel due to ongoing planning efforts and other requirements. One method of overcoming this limitation is to anticipate these challenges and prepare a staff training and indoctrination program ahead of time. Personnel that may be required to serve as JSOTF planners can attend individual training courses such as the JSOTF course offered by the Joint Special Operations University (JSOU) or the joint fires course offered by U.S. Joint Forces Command (USJFCOM) prior to a JSOTF being established for an exercise or contingency operation. After a JSOTF is established, a staff training program could be executed that is either self-paced, conducted by a training team (either SOF joint training team (JTT) or internal to the JSOTF), or a combination of both. The program should include as a minimum, an area study, higher HQ and JSOTF base orders and annexes, current operations summaries and intelligence summaries, related Service and joint publications, and administrative information. Most importantly, JSOTF planning SOP should be an essential part of this training program. However, most SOP are too long, out of date, and not read and understood by all JSOTF planners. An effective SOP needs to be simple, concise, and graphically depict the planning process and required products. It should also be focused not only on members of the core organization, but on augmentees as well. After augmentees complete this initial

training, which should not be designed to require more than a few days to complete, another member of the JSOTF planning team can sponsor them for one or two mission planning iterations, until they understand how the section operates and are prepared to independently conduct their required tasks. While this may sound like a lengthy process that will require additional work up front for core planners, the end result is a productive member of the planning team instead of a "warm body."

Get Planning Guidance

Timely guidance is the most essential element to effective planning. Without sufficient guidance, staff planners usually waste valuable time and develop unnecessary planning products. Guidance can come from a variety of sources. The first and most important source of planning guidance is the commander. However, the J3 or JOC chief can also provide guidance to the J35 and JPG. Additionally, the future operations chief can provide planning guidance to his staff, and other directors can provide functional guidance to their JPG representatives. There are numerous ways to obtain planning guidance. Regardless of the methods used to solicit guidance, it needs to be clear, complete, and constantly updated to adapt to the evolving situation. During the planning process for operations and individual missions, planners should seek guidance from the commander or his designated representative at key points in the process, such as the initial feasibility assessment/mission analysis at the beginning of course of action (COA) development, and during COA selection. The planning staff must go into each of these key events with a clear understanding of the elements of information that they need to continue planning. The staff has a responsibility to ensure they obtain this information from the commander or his designated representative. Often, the best way to achieve this is to provide staff recommendations for the required elements of information. The commander may not always agree with your recommendations, but it allows him or her to shift from a known point if necessary. Either way, in the end the appropriate planning guidance is provided to planners.

Planners also need updated guidance on a regular basis as the situation on the battlefield evolves. Planners can get this updated guidance through scheduled meetings, briefings, or informally. One proven method of getting updated planning guidance is through a routine "future operations update brief" to the commander. The frequency and format for this brief can vary widely based on the situation. However, it should be a regularly scheduled event posted on the JSOTF battle rhythm. A sample agenda for a future operations update brief is shown in Figure 6.

This agenda highlights required planning decisions up front. Next, regional activities that impact the JSOTF, current JTF and JSOTF planning efforts, and an operational assessment are presented. Based on this information, the planning staff recommends missions for planning and planning priorities. The commander then approves or modifies these recommendations, and imparts additional guidance as required.

Communicate and Manage Plans Information

Information management (IM) has become increasingly important as the volume of information available to, and produced by, JTF and JSOTF planners has become almost overwhelming. The JSOTF information management officer plays a key role within the JSOTF HQ for selecting IM tools and establishing overall procedures. JSOTF planners must effectively collect and pass key information such as planning guidance, internally and to higher, lateral, subordinate commands, and LNO. They must also develop and enforce efficient procedures for managing this information so that it is up to date, and easily found and accessed by other users. JSOTF staffs have multiple mediums to use for passing information: Defense Switched Network (DSN), commercial, or cellular phones; Secure Internet Protocol Routing Network (SIPRNET) e-mail; a variety of information sharing and collaborative tools (Web page/Web Information Center (WIC)); NetMeeting; Defense Collaborative Tool Suite (DCTS); Mirabilis Internet Relay Chat (MIRC); Info Work Space (IWS)); and radio communications give planners unprecedented capability to receive and transmit

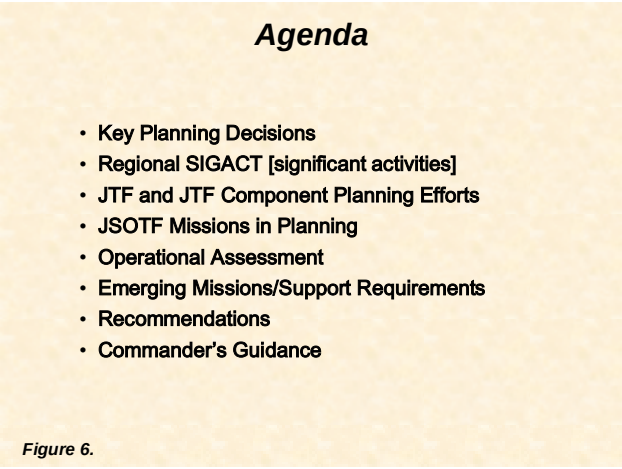


Figure 6.

information. However, this robust capability does not necessarily equal effective communications. Effective communications are the result of identifying essential information, determining who needs the information, and then combining the appropriate information transmission mediums with processes and procedures that ensure the right people get the right information in a timely manner. Essential planning information includes things like commander's guidance; higher, adjacent, and subordinate unit activities; and emerging mission or support planning requirements that impact the JSOTF. After the key elements of information are determined, select the best means of transmission for each type of information. For example, as discussed previously, getting commander's guidance is critical to effective planning. However, after the JSOTF future operations section receives this guidance, they must not only act on this direction, but also pass this information to components and LNO to facilitate their planning efforts. There are many ways to pass this information, but one proven technique is to host a routine collaborative session with components and LNO via Net meeting or some other tool using the future operations update brief as a format or agenda for the session. Another method is a daily information e-mail sent from the JSOTF future operations chief to all components and LNO that highlights commander's guidance and other relevant planning information. Finally, guidance can be passed by phone or radio. The bottom line is that the means of transmission is not the most important component. The most important thing is to decide how to pass the guidance, make it a routine battle rhythm function, and task someone with the responsibility to make it happen.

Another critical element of information is determining mission requirements from supported components. JSOTF LNO can play a significant role in the communications process by serving as both filters and conduits of information between units. Frequent communications between JSOTF planners and higher, adjacent, and subordinate headquarters fosters greater awareness of capabilities, status, and support requirements. A daily phone call or collaborative session between the JSOTF future operations chief to LNO and counterparts in other organizations will greatly enhance the effectiveness of communications between the JSOTF, the JTF, and components.

The JSOTF must also provide formal tasking to components on a routine basis. This formal tasking normally occurs as a fragmentary order (FRAGO). In recent operations and exercises JSOTF planners have successfully implemented a daily FRAGO. This document, published daily at the same general time, provides components with updated planning requirements and guidance on a regular basis. This helps to limit the confusion caused by complex, dynamic operations. The daily FRAGO can also include concept of operations (CONOPS) approval execution authority for missions, thereby eliminating the need for separate messages.

Establishing and enforcing information management processes and procedures within the future operations section is a key responsibility of the deputy plans chief and the NCOIC. Key planning documents such as orders, relevant briefings, mission folders, mission tracking, and force tracking spreadsheets need to be maintained in an accessible location that is easy to find. Information that needs to be shared outside the JSOTF should be placed on the JSOTF web page. Internal JSOTF planning information can be maintained on the JSOTF shared drive. In either event, procedures to periodically backup information need to be established to prevent the total loss of information due to a system failure.

Conclusion

In concept, joint planning appears logical and relatively simple to perform. However, this appearance is very deceiving. Planning in a fast paced environment, without the luxury of a stable of fully qualified and trained staff, can make the seemingly simple tasks extremely challenging. The key to successfully overcoming these planning challenges is to focus on the fundamental planning tasks of organizing for efficient planning, training staff members to use and adapt the planning process, getting planning guidance, and communicating and managing plans information. Focusing on these fundamentals will greatly increase the effectiveness of the JSOTF planning efforts.

About the Author

LTC Wade Owens is a U.S. Army Special Forces officer currently assigned to SOCJFCOM as a Plans Observer Trainer. He has served as a JSOTF staff officer during several exercises and operations. Recently, LTC Owens served as a planner for CJSOTF-North during Operation Iraqi Freedom. His previous Special Forces assignments include Detachment Commander, Company Commander, Battalion, and Group Operations Officer, 7th Special Forces Group. LTC Owens is also a graduate of the College of Naval Command and Staff.

"Joint Special Operations and the National Guard, …. Transforming the Future"

LTC Pat Stevens, Army National Guard

The effects of September 11, 2001 permanently changed America's outlook on internal and external threats, and revalidated the importance of the National Guard role in joint special operations. This article discusses the critical role the National Guard Special Operations Detachment (SOD) plays in joint operations, its relevance as a force multiplier, and the transformational impact it has on joint operations for both the Guard and the Active component.

The National Guard (NG) contributes significantly to joint operations year after year. Currently for July, upwards of 75,000 National Guard members from various units are employed in a joint environment, with a potential increase of additional NG forces. Additionally, the 19th and 20th Special Forces Group (Airborne) (SFG (A)) regularly conduct multiple joint combined exercise training (JCET) and Joint Chiefs of Staff (JCS) directed exercises worldwide directly supporting the theater security cooperation plan (TSCP) of each of the four geographic combatant commanders (GCC). This dimension of joint interoperability primarily focuses at the Operational Detachment Alpha (ODA) through battalion-level, and usually involves both special operations and conventional forces from the United States and from a host nation. With the 9-11 aftermath, a new dynamic emerged in the special forces community by tasking the O-6 special forces command headquarters to serve as the command and control headquarters for the joint special operations task force (JSOTF). In the past, this task was specifically delegated to the theater special operations commander in each theater. Last year, the 20th SFG (A) Headquarters staff made an historic first by assuming the command and control (C2) for the JSOTF in Operation Enduring Freedom (OEF), which incorporated both NG and Active special operations forces (SOF) components. This was the first time the NG was empowered to take the lead effort from another active duty SOF O-6 command, and assume the command and control of all joint SOF operations in Afghanistan. The use of 20th SFG (A) stands as a testimony to the growing dependency upon the NG community as a ready and relevant force.

Concurrently, in 2002, the National Guard Bureau created and resourced six special operations detachments (see Figure 1). Each 30 man SOD is aligned with a regional theater special operation command (TSOC), to include Special Operations Command (SOC) - Korea. The SOD serves as the National Guard element to augment a JSOTF with critical SOF and conventional manpower that are joint operations focused. On the regional level, the SOD enables the TSOC to remain regionally and operationally focused, and minimizes the expectation for SOC components to fill joint operations center level positions. At the organizational level, the SOD tempers the formation of an "ad-hoc" staff with individual

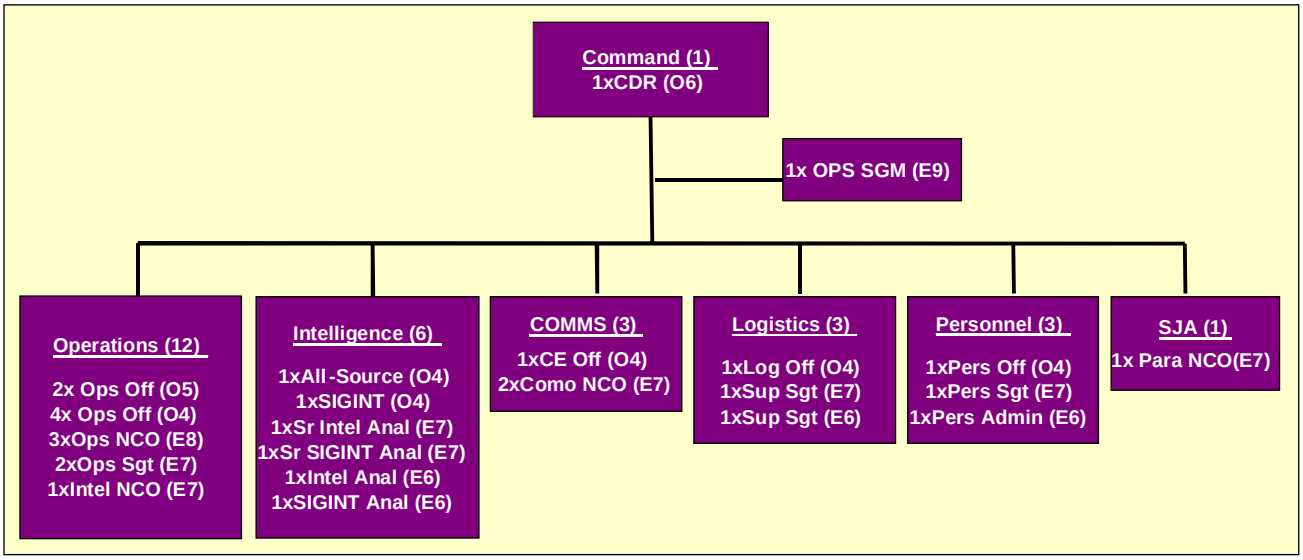


Figure 1. SOD organization

augmentees by providing a tailored pool of personnel. Just as it is difficult for any commander to maintain staff proficiency, it is equally a daunting task to build a JSOTF headquarters and quickly fill a JSOTF joint manning document (JMD) with the necessary skill sets. The generic SOD Table of Distribution and Allowance (TDA) is streamlined and offers critical military occupational specialties (MOS) skills tailored in operations, intelligence, communications, logistics, and administrative functional areas. The SOD element provides a commander the ability to augment his JSOTF staff and rapidly project his force into the theater of operations. Most importantly, the SOD assists the commander in maintaining joint competency at an acceptable level by the inherent long-term continuity of a NG unit. In OEF and Operation Iraqi Freedom (OIF) a significant number of billets on joint manning documents (JMD) were filled by augmentees from both the NG and Reserve forces. The SOD fills the nitch for the TSOC/GCC in a unique way by providing personnel trained in the basics of joint operations and seasoned by further collective training. This was recently demonstrated with the mobilization and deployment of the SOD aligned to each of the theater SOC (SOC Central Command (SOCCENT), SOC European Command (SOCEUR), SOC Southern Command (SOCSO), and SOC Joint Forces Command (SOCJFCOM)) during OIF, most of whom are still providing this critical joint support in theater.

Executive seminars presented to a JSOTF staff

"The Road to Success"

The first level skill sets that the SOD acquires are through an individual CD ROM self-paced joint overview. The self-study program is followed by institutional education at the Joint Special Operations University (JSOU) located at Hurlburt Field, Florida. The JSOU provides individual education in joint SOF operations and SOF integration with conventional forces. Typically, the SOD personnel attend a variety of JSOU courses such as: JSOTF, special operation liaison element (SOLE), and joint firepower control. The soldier-doctrine-technology triad is never more profound or more relevant then in the joint operations community where a working knowledge in a multi-service/ interagency field is the hub of our military transformation process.

Training is further enhanced by SOD participation with their assigned TSOC during training conducted by the SOCJFCOM joint training team (JTT). SOCJFCOM, located at Norfolk, Virginia, is the TSOC for Joint Forces Command. SOCJFCOM is the nucleus for worldwide joint SOF training, doctrine, and experimentation, and it is the home for the National Guard's Special Operations Detachment-Joint Forces (SOD-JF). SOCJFCOM's charter is to train the commanders and battle staffs of GCC, and TSOC commanders, on SOF employment, capabilities, and the conduct of special operations in a joint multinational, interagency environment.

Using the JTT, SOCJFCOM provides worldwide training of all TSOC and designated commands on a regular basis. During the collective training phase, the TSOC and the SOD benefit from mission-driven training in the form of executive and functional seminars derived from the TSOC/group commanders joint mission essential tasks list, or JMETL. These seminars typically culminate with a staff exercise (STAFFEX) that exercises internal standing operating procedures and processes, allowing the staff to develop into a coherent team capable of conducting both current and future joint operations. With SOCJFCOM providing tailored joint sustainment training to leverage critical threads through subject matter experts (SME), the joint transformation process evolves.

Functional seminars conducted at the TSOC level

smooth mobilization gave the TSOC/JSOTF the edge to attain proficiency with the latest Internet technology (IT) tools and quickly integrate efforts in the information-centric environment of current joint operations for OIF. Such skill sets are critical force multipliers on a battlestaff where the three dimensional battlespace is defined by dozens of simultaneous multifaceted SOF operations.

Additionally, the SOD bring with them special skills from the civilian sector that enhance the capabilities of the JSOTF. For the SOD-JF, personal experience was cross-walked from various government agencies that indirectly supported tasks in intelligence, operational planning, communications, logistics, administration, and construction. This was evident with civilian skill sets embedded with such agencies as the National Security Agency (NSA), Defense Intelligence Agency (DIA), or having proficiency in carpentry or electrical construction skills. The benefit of having an officer or noncommissioned officer (NCO), whose full time civilian job is working for an agency, provides a human resource steeped in real-world experience. In OIF, the SOD-JF

SOD training is further enhanced with the participation in a major training event that embeds the SOD into a JSOTF staff, such as Bright Star, Tandem Thrust, or Millennium Challenge. Joint training exercises further battlestaff proficiency by incorporating the latest state-of-the-art information technology for joint information sharing, force tracking, and collaboration. The standard information sharing and collaborative tools for SOF are the web information center (WIC), defense collaboration tool suite (DCTS), and the command and control personal computer (C2PC). The inter-active, information-sharing collaborative tools are the cutting edge for information management for the joint operations community. These tools are also key to providing and maintaining rapid "near real time" situational awareness and connectivity internally for Army SOF (ARSOF), Navy SOF (NAVSOF), and Air Force SOF (AFSOF), as well as externally for SOF liaison elements, components, and staffs working with conventional forces. The sharing of information in a web based "purple" environment has become the hallmark for joint operations that critically depend upon technology to enhance a commander's speed and agility. The SOD ability to participate in collective training and conduct a

SOF during a multinational joint training exercise

SOCJFCOM SME assist SOF during OEF

backbone of experience increased the overall effectiveness and relevancy in all functional areas.

Historically, active duty joint staffs are plagued by the frequent turnover of personnel, on the average, every two years. National Guard personnel typically remain in their positions for over 3 years. The SOD can help mitigate this turbulence by filling this gap and providing the commander with a continuous thread of continuity and stability. Sustainment training and fiscal resourcing for the all SOD will continue to be critical enablers to a successful joint transformation process.

During this era of 21st century conflict marked by terrorism and unconventional warfare, unity of effort requires all Services to be open minded to change and acquire the requisite skills to remain relevant. The importance of the role of the NG in joint operations cannot be overemphasized, and operations in Afghanistan and Iraq bear this out. Competing requirements and limited resources reinforce the fact that Air and Army National Guard units participate in joint exercise and contingency operations. Currently, four out of six SOD have been successfully employed with active duty joint commands in OIF, clearly demonstrating initial success and validating the NG's integration into the "purple" world at the operational level. Available personnel resources from the National Guard complemented by civilian skills, makes the SOD concept an ideal joint force multiplier for the long duration Global War on Terrorism. The ability of the NG to enhance Active components through organizational support, force structure, and fiscal resources to support the Active component, allows the joint transformation process to evolve in its purest form. If the National Guard is to remain ready, relevant, and accessible as players in future operations, it is incumbent upon our community to attain the joint interoperability and connectivity at all levels, maintain the knowledge of joint processes, and sustain our joint proficiency in the "purple" multiservice, multiagency environment. Successful transformation rests with the leadership, both Active and NG, in continuing to support, expand, and leverage this truly joint capability.

About the Author

LTC Pat Stevens currently is the Title 10 Senior Guard Advisor at SOCJFCOM, Norfolk, Virginia. He has attended numerous courses at the Joint Special Operations University and is a graduate of the Joint Forces Staff College. He has vast experience as a joint operations project officer, participated in numerous joint exercises, and is the principal NG SOF point of contact for all actions between NG SOF, the SOD-JF, and SOCJFCOM. LTC Stevens recently served as the JSOTF-West Joint Operations Center Director during Operational Iraqi Freedom. He is currently working as an operations observer/trainer for SOCJFCOM.

Information Management: Minimizing the Digital Fog of War

LTC Bradley Bloom, US Army

Ideally, information management (IM) leads to shared situational awareness through fused and focused information that in turn enhances rapid and informed decision making and promotes operational agility. While the military has quickly assimilated new collaborative software and other information technologies, we have done so without maturing a common doctrine for tracking, filtering, storing, or disseminating operational data, or fully synchronizing our physical processes within headquarters to capitalize on emerging capabilities. Instead of leveraging technology to improve shared awareness and compress the decision cycle, we have allowed poorly managed information to create a digital fog of war.

In the IM challenged headquarters, the issues are both physical and virtual. On the physical side, the battle rhythm is often filled with redundant meetings or boards whose final product is neither linked to the other elements of an integrated process nor rapidly fed back into the execution cycle; briefings are poorly structured and filled with superfluous information; liaison officers (LNO) are integrated as extra manpower for off-hour shifts; and, collaborative requirements are heaped on subordinate headquarters that lack the manpower to meet them without negatively impacting their own operational planning.

On the virtual side, critical files are placed in shared drives without a standard naming convention or file structure; servers are littered with iterative versions of the same product in multiple locations; web pages have geriatric documents listed as "new"; the video teleconferencing (VTC) room is a constantly overbooked, unregulated bandwidth hog for minimally productive gab sessions; individuals are constantly bombarded with requirements to learn the new "software-du-jour"; and, when a new document is finalized, the average client receives seven forwarded emails with the same twenty megabyte attachment. In addition to overwhelming the average user, these practices often lead to a self-imposed denial of service due to the chaotic free flow of excess data over limited bandwidth.

These challenges are magnified exponentially when deployed organizations are dealing with numerous subordinates and parallel organizations in a high operations tempo (OPTEMPO) contingency. All of these issues are usually resolved over time, but in a contingency environment, time is a precious commodity.

Fortunately, the solution is far less complex than the problem itself. By establishing and enforcing an organizational IM plan that fuses an integrated battle rhythm with the technology of the collaborative information environment (CIE), commanders can reduce administrative workloads, improve shared situational awareness, enhance decision-making, empower subordinates, and get on about the business of war fighting with less information gridlock. More importantly, the organization streamlines and refines the process through which the commander receives information, synchronizes the fight, and exerts operational control.

Developing an IM plan

The first step in developing an IM plan is to form an information management board (IMB). Once formed, the IMB identifies operational requirements and functions, reviews and recommends the appropriate software and hardware solutions (information technology or "IT"), develops implementing policies and procedures (IM P2) for both virtual and physical processes, designs a training and certification plan, and assists the commander with continuing enforcement and refinement. In this paper we will discuss each of these actions and highlight key theoretical terms and constructs.

Forming the IM Board

Contrary to the current structure of many organizations, the IMB should not be dominated by information technology personnel (J6) augmented by reluctant third party conscripts. The IMB should be a broad cross section of all staff sections with heavy representation from intelligence, current operations, and plans personnel. Each section with a dependence on information that is tracked, stored, or disseminated has a stake in tailoring a common IM plan to address their specific needs. Due to the staff integrating function of the IMB, and its impact on operational products and organizational battle rhythm, the deputy joint force

commander or chief of staff is a logical choice to convene critical board sessions and carry resultant recommendations to the organizational commander for final approval.

Functional Categories of Information

By grouping information into functional categories (derived from operational requirements), the IMB can subsequently select and integrate the proper tools to assist the staff in managing information, thus enabling the organization to refine the battle rhythm and technology through which the information is shared. For the purpose of this paper, the three functional categories of IM are collaboration, information sharing, and battle tracking. These functions are not revolutionary and are common to every operational headquarters. Although each area is somewhat unique, there are overlaps in timing, tools, and concept. A graphic representation is shown below.

Collaboration

Collaboration is defined in this paper as those actions between two or more people that facilitate the real-time exchange of information with a goal of enhancing joint product development, refinement, or decision-making. Examples of collaboration within a headquarters include formalized boards, bureaus and centers, meetings, and ad-hoc working groups. In geographically separated headquarters and components, traditional collaboration means include LNO, telephones, email, and VTC. Newer technology has expanded collaboration to include a voice or text "chat-room" with file sharing and joint editing capability. Some commonly used tools are the defense collaborative tool suite (DCTS) and info work space (IWS). When properly configured, these capabilities provide a significant increase in collaborative potential beyond radio nets, conference calls, or traditional VTC that remain plagued by terrain constraints, high bandwidth requirements, and limited participation parameters.

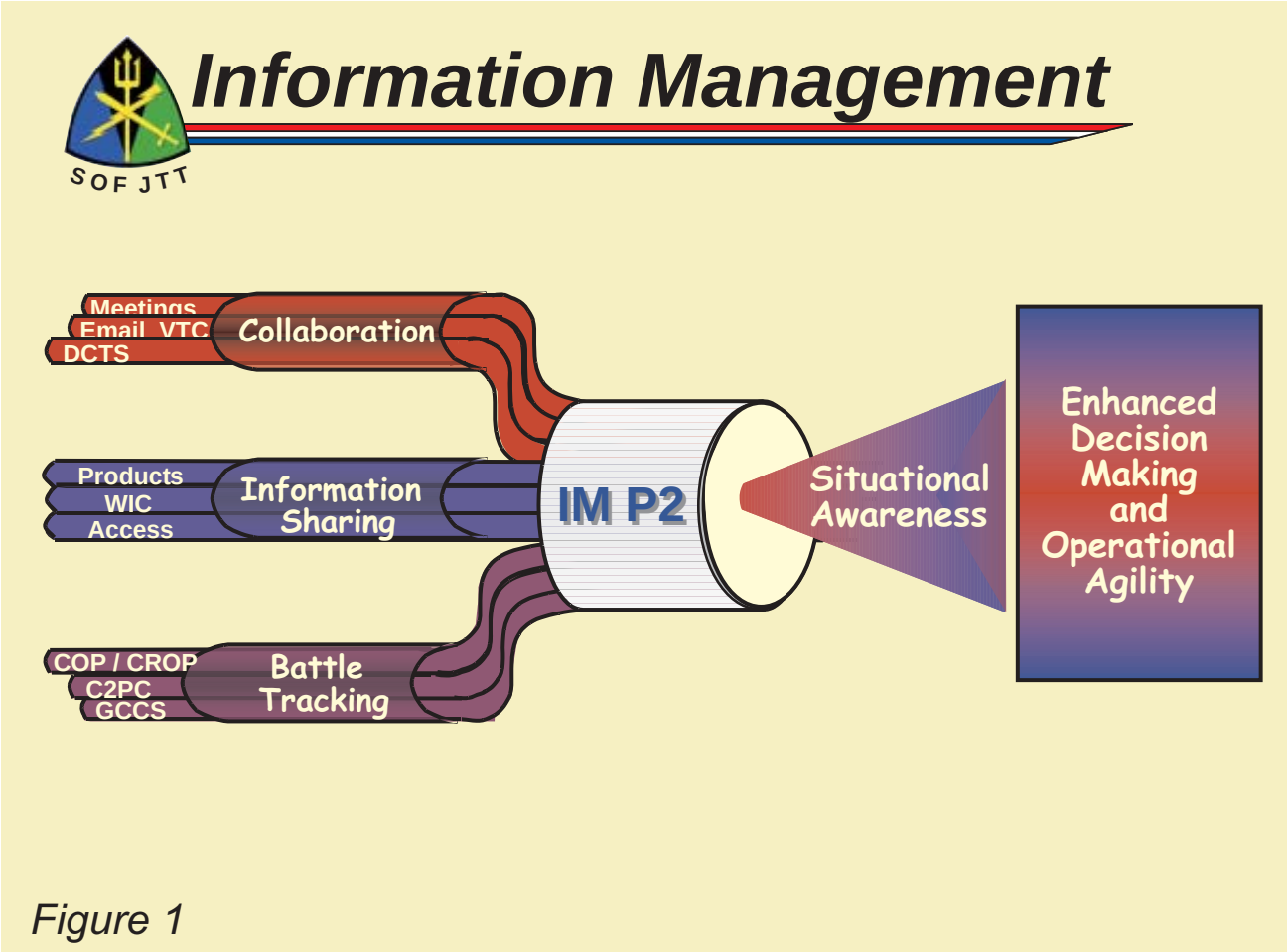


Figure 1

Even with the advances in collaborative technology, LNO will continue to play a key role in communication with the represented headquarters. No amount of digital wizardry can fully replace the positive value of human interaction in building mutual trust and confidence; a key component of decentralized execution. This concept must be taken into account when developing IM P2.

Collaboration spans the entire plan, direct, monitor, and assess cycle. These tools can be used to easily build real time virtual working groups, or extend an internal event such as a commander's decision brief to selected external audiences. Although most intensive in the planning process, collaboration carries over to current operations when addressing emerging issues among multiple players such as time sensitive targeting or personnel recovery. Multi-level collaboration can also be used to conduct force rehearsals using an execution checklist or a matrixed war-gaming process. Effective collaboration uses both ongoing/discrete and scheduled/ regulated formats. As familiarity with collaborative tools expands, they will eventually become the core component of command and control systems.

Information Sharing

Information Sharing (IS) is defined in this paper as the IM function that provides regulated access for both the parent headquarters and outside organizations to finalized documents and real time decision support products through a common interface. Many headquarters remain hobbled because they post finalized staff products on an internal local area network (LAN) that fails to provide shared or intuitive access for outside consumers. Users are relegated to an iterative and often time consuming higher, lower, and lateral "push-pull" process for key data.

Optimally, IS tools are web based with an intuitive file and link structure and layered access. In many organizations, particularly special operations forces (SOF), this tool is often referred to as the web information center (WIC). Examples of key elements of information sharing provided by a functional WIC are current commander's guidance, battle rhythm, situation reports (SITREP), operations orders (OPORD), fragmentary orders (FRAGO), messages, requests for information (RFI) status, tasker status, staff assessments, current air tasking order (ATO) and intelligence, surveillance, and reconnaissance (ISR) plans, a critical activities log, links to subordinate unit web sites, links to supporting organizations, and access to a graphic representation of the common relevant operating picture (CROP) (see battle tracking). Obviously, not every user requires access to all information, and part of optimizing IS is establishing an access plan and related permissions.

Battle Tracking

Battle tracking is defined in this paper as the process through which an organization receives, processes, and displays current information about friendly and adversary forces, activities, or capabilities aligned over terrain to produce a CROP. Conceptually, the CROP is a user filtered display of key operational graphics such as blue force locations, flight corridors, templated enemy positions, theater missile defense (TMD) coverage, named areas of interest (NAI), mensurated or restricted targets, etc. These overlays are drawn from a broader database of information known as the common operational picture (COP). When filtered to meet individual information requirements, the unified display becomes the CROP for that user. For example, the baseline display for a logistics coordinator would contain different fields than the baseline display for the joint fires coordinator. However, both operators would have the ability to activate additional overlays as required.

The key aspect of successful COP management is the assignment of responsibility for maintenance and currency of each of the databases that supply CROP overlays. Instead of being contained within one headquarters, this responsibility is generally distributed among operational layers and supporting organizations. The feeds that link this information are an integral part of battle tracking architecture. In some instances, data such as friendly unit locations can be updated automatically through technology such as Blue Force Tracker. In other cases, data such as enemy locations must be manually entered based on human analysis and assessment. Most COP feeds will be open, but some due to the sensitivity of the data, may be discrete.

The current tool for displaying the CROP is the command and control personal computer (C2PC). There are also service and functional tools such as the Army Digital Operations Control System (ADOCS) and terrain software such as FALCON VIEW from which user data must be extracted and placed in the C2PC format. Currently not all systems are data compatible,

so a great deal of data transposing must be done manually. Until there is a truly joint, integrated battle management system, this turbulence can be minimized through the designation and enforcement of common authorized software with limited exceptions.

Developing IM P2

The right tools used improperly are just as capable of overloading networks and individual users as unmanaged chaos. Once an organization has determined its functional information requirements and selected the necessary IT to facilitate the flow of information, the IMB is responsible for recommending IM P2 that governs their use. IM P2 approval, as well as enforcement, remains a command function. When developing IM P2, the computer network defense and operations security (OPSEC) cells should be fully integrated into the process. Increasing reliance on IT has become a mission critical vulnerability.

Viable IM P2 is the critical leap to optimizing the flow of relevant information, increasing staff efficiency and thus compressing the decision cycle. The guiding principles for IM P2 are no different than those for quality staff work in the absence of IT. Some examples are:

- Fix overall responsibility and enforcement authority for IM.
- Establish meeting agendas and protocols, specified products, and formal integration between components and processes within the battle rhythm.
- Monitor and refine the battle rhythm to eliminate redundancy (including repetitive briefing content for core audiences).
- Regulate collaboration demands on smaller subordinate headquarters and key individuals.
- Establish section distribution plans and release authorities (what is posted and where, e-mail groups and controls, who receives, logs, forwards, or posts critical information).
- Establish clear and responsive access policies, procedures, and permissions (internal and external).
- Define the role and responsibilities of LNO.
- Assign responsibility for WIC modules, such as maintaining the RFI journal, tasker log, unit activities log, etc.
- Assign scheduling responsibility for key facilities (physical and virtual conference rooms).
- Practice file and version control (keep the common desktop clean).
- Establish intuitive storage locations and product naming conventions for both WIC based and localized draft products. Files more than two layers deep are generally too difficult to locate.
- Establish common file and briefing formats that are bandwidth friendly.
- Publish an IM standard operating procedure (SOP) and operational directory for new users.
- Establish common workstation configurations and information assurance policies.
- Develop a coalition integration plan that accounts for information classification levels, foreign disclosure, and system compatibility.
- Develop and rehearse an alternate command, control, communications, computer, and information (C4I) plan and system work-arounds in the event of system compromise or denial of service.

IM Training and Certification

The best of plans quickly become unexecutable when infused with a preponderance of participants that are unfamiliar with them. Such is generally the case with IM when a headquarters deploys and rapidly expands through joint manning document (JMD) fill, augmentation, and interaction with non-habitual subordinates. Another common problem is the development and use of an IM plan and specific IT for an exercise or contingency, followed by a return to a different set of daily administrative IM P2 and technology.

The truism "train as you fight" describes the requirements associated with the lifecycle of an approved IM plan. Train individually, train collectively, conduct rehearsals, and certify. Since there are broad

variances in common board processes, products, and software familiarity across the Services, Active, and Reserve components, new personnel must be integrated through a deliberate training process. If your organization is part of a force rotation, the transfer of a standing IM plan is one of the most critical aspects of assuming initial operating capability. The situation is even more challenging for ad-hoc organizations not built around a previously trained or proficient headquarters. IM becomes a catalyst to help inform, organize, and enable. Once operational, the new organization can modify a good legacy plan to suit their needs and situational requirements.

Summary

In this article, we have examined the role and composition of the IMB, the functional categories of information (collaboration, information sharing, and battle tracking), examined broad parameters for IM P2, and discussed IM training and certification. The objective is to free the operational staff from the perceived ball and chain effect of the desk-side computer, and organize our information age tools to empower creativity, agility, and rapid decision making through common situational awareness. In taking these concepts to heart, we create the opportunity for operational agility beyond the dreams of Clausewitz with a surgical application of resources that would make Sun-Tzu smile.

About the Author

LTC Brad Bloom has been assigned as the SOCJFCOM PSYOP Observer Trainer for the last 18 months. His previous operational PSYOP and information operations (IO) experiences include contingency deployments for Bosnia and Kosovo, and post 9-11 participation in the USSOCOM Campaign Support Group. During Operation Iraqi Freedom (OIF), LTC Bloom worked with the USCENTCOM Staff, the Combined Forces Special Operations Component Command, and subordinate troop units. He also served as a member of the JFCOM Joint Lessons Learned Collection Team attached to CFLCC. LTC Bloom's other previous assignments include Gulf War service in the 3rd Armored Division, Company Command of Delta Company, 2-504 PIR, and tours with the 6th and 9th Psychological Operations Battalions at Ft. Bragg, NC. His next scheduled assignment is command of the 3rd Psychological Operations Battalion beginning in the summer 2004.

The Need for a Uniform Collaboration Tool Standard

Maj Robert J. Nash, USMC
SGM Ken Teske, USA
SOCJFCOM

Under the concept of "train as you fight," it is incumbent upon the joint task force (JTF) commanders and staffs to enforce a collaborative planning environment policy that considers the information management (IM) needs throughout the JTF. This should take into account the subordinate unit, coalition partners, and other units that are laterally among the JTF components required to conduct planning. In a non-contiguous, fluid environment involving players from different Services and nations, the need for a uniform collaboration tool standard is paramount. For the purposes of this paper, standard or standardization is interoperability and commonality of the systems that will be used to ensure seamless collaboration.

Standardization can be accomplished:

Eleven years ago, the Department of Defense (DOD) contracted Microsoft to provide operating systems and software for DOD personal computers (PC). Since then, Microsoft (MS*)* Power Point has replaced Harvard Graphics as the DOD standard. MS Word has replaced Enable, WordPerfect, and Word star as the DOD standard software for word processing. Although MS Outlook is the DOD standard e-mail application, passing e-mail traffic in and out of DOD domains is possible due to a uniform language, simple mail transfer protocol (SMTP). Currently no common protocol or uniform language for collaborative tools is in existence among the various tools that encapsulate all the required collaborative functions: directory listing, text chat, white board, voice, and video drivers.

With the continuing advance in computing technology, a VTC that once required the use of specialized equipment and facilities can now be conducted with increasing reliability on an individual workstation. The special operations forces (SOF) community has been using distributed collaboration tools for many years in order to take advantage of the technology available to execute their missions.

The collaborative process continues to be refined each time a unit undertakes an exercise or operation.

In order to effectively collaborate throughout a global network, there should be a single, uniform collaboration tool standard. There is no standard collaboration tool protocol among the collaboration tools currently that are available: NetMeeting (NM), Info Work Space (IWS), Mirabilis Internet Relay Chat (MIRC), and others (unlike email that uses a standard protocol). The fact that there are several tools available raises the issue of standardization; each unit typically uses their own "favorite," sometimes down to the peer-to-peer level. As with any other tool, once "your favorite" gets regular use, it becomes part of a units' battle rhythm and "corporate culture." It is often difficult to separate the user from his or her favorite application.

Currently, the defense collaboration tool suite (DCTS) (a family of applications that includes *NetMeeting, Real Player* streaming media, and *Envoke* secure messaging) is being fielded and widely used across DOD.

NM satisfies many of the collaborative planning criteria; however, within the SOF community and even among the individual joint special operations task forces (JSOTF), other tools are also being used such as IWS and MIRC. What once may have been considered "bells and whistles" have evolved into the routine processes and functions of operational staff work.

Integration of collaborative tools:

Commanders presently maintain the traditional written orders prior to and during an operation. With the increasing use of collaborative tools, the planning process leading up to the finished product is now done in a manner where quick, interactive inputs into the planning process are injected by commanders and staffs at each level right up until the time of execution to better the product. Within the distributed collaborative environment, the commander and staff responsible for physically executing the plan have the ability, and responsibility, to provide immediate feedback should an attribute of a plan be found to be untenable, need additional support in response to the commander's guidance, or require additional staff work. Unlike the earlier methods of sequential planning for a linear battlefield, those interactive "bells and whistles" are now thought of as the "nuts-and-bolts" of a collaborative planning environment for a modern non-contiguous battlefield. This capability offers commanders tremendous flexibility, and at times this may even shorten the planning cycle.

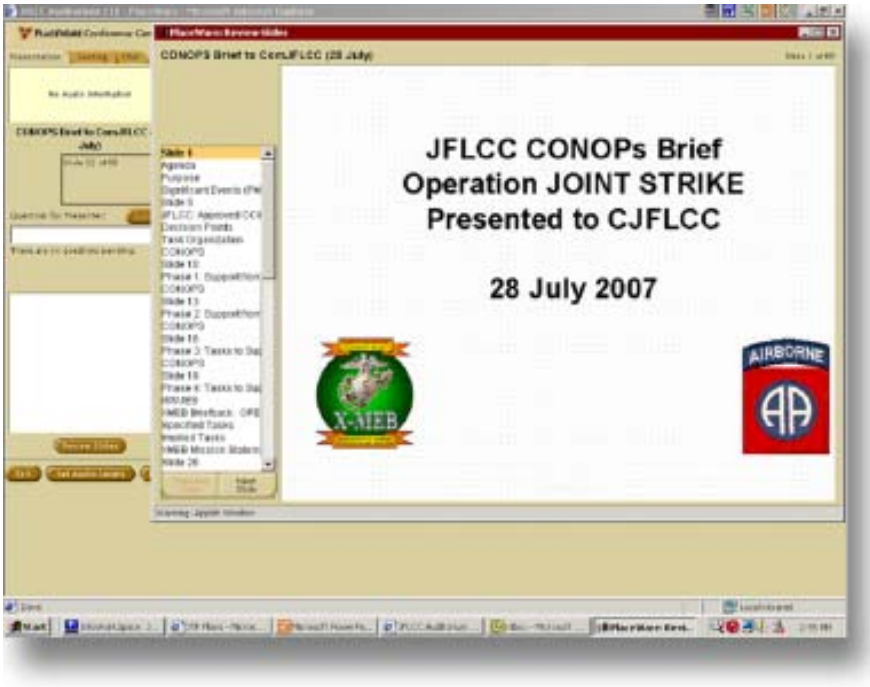
During Operation Enduring Freedom (OEF), during a collaborative planning session for a mission in Northern Afghanistan in October 2001, a logistics specialist (E-4) who happened to have first-hand knowledge of the status of a particular type of munitions that was critical to the success of a mission (one that was in the final stages of planning) was able to weigh in to the planning process in a timely manner. His knowledge of the mission in planning and subsequent actions taken to provide support precluded having to abort the mission. Had planning for this mission been conducted in a non-collaborative environment, it would likely have been too late to affect a change prior to the go/no-go decision. So the challenge is not *if* but *how* SOF, and the U.S. military overall, will use collaboration tools in the future to gain their maximum potential benefit, and include the *right* participants.

During Millennium Challenge (MC02) (the expansive Joint Experimentation and Integration (JEI) exercise conducted in the summer of 2002) IWS was designated as the collaborative tool of choice. During the exercise, the JTF commander was able to have his daily effects tasking order (ETO) update sent from an airborne platform out to units that were spread out across the land and on ships at sea in real time. The comparison between the old fireside chat and the present collaborative session at 35,000 feet is that the medium was readily available to all who needed it, and there was an interactive process that existed among the commanders and staffs.

Many SOF commands currently use NM.

This is due to a number of reasons, one of which is that it is readily available. It comes as part of a standard load with all Microsoft operating systems (MS OS), which is a standard for US military-owned PC. NM allows multiple users to conduct text chat across a distributed collaborative environment. NM also allows peer-to-peer (P2P) voice and video (vox/vid) with the addition of a peripheral microphone and web cam. *Note that most users would gain minimal benefit from the use of a web cam and that the video aspect of NM requires a greater use of limited network bandwidth.* However, the use of file transfer, white board, and screen capture in order to scroll through slides *has* proven to be a good way to conduct interactive collaborative planning and to conduct daily briefings, all from a user's desktop or laptop.

As mentioned earlier, IWS (*Placeware* ®) was used during MC02, mainly between the JTF and component commanders. IWS is a proprietary software title that provides the user with multiple text chats, voice chats, white boards, message posting, and file sharing capability, and has the ability to create virtual conference auditoriums through the use of an additional web-based share point portal server (SPPS). Because IWS is a proprietary interest, a license is required for each workstation and server using IWS within the collaborative network. Compare that to NM, which is already a part of the workstation's OS. Additionally, because of the proprietary nature of IWS, it is not available to all potential users without the requisite coordination of acquiring a workstation site license; ad hoc users would need to have the licensed software in order to participate in a planning session. JTF180 in Afghanistan is an exception in that they *did* demonstrate success in the use of IWS during their 2002 deployment, but again user/system administrator training and investment in site licensing must be considered if it is to be used with reliable results.



Another collaboration tool common to the US Air Force (USAF) and Air Force Special Operations Command (AFSOC) is MIRC. MIRC is a freeware title that is available for download on the unclassified Non-secure Internet Protocol Routing Network (NIPRNET). To date, MIRC has not been fully integrated into the defense information infrastructure/collaborative operational environment (DII/COE), which is a standard established by the DOD to ensure security and compatibility with other DII/COE applications in the lexicon of DOD approved software titles. Therefore, MIRC has the potential to be used as a transmission means by which DOD security policy standards have not yet been met. MIRC has the ability to open multiple text chat rooms, which has been shown to be very useful to users such as the joint operations center (JOC) intel officer, space liaison officer (LNO), and the recovery coordination cell (RCC) during Operation Iraqi Freedom (OIF). Additionally, MIRC users can pass files across the web to multiple recipients, as can NM and IWS users.

Identifying Limitations:

There are limitations involved with the use of all of these tools. A user can copy and save a chat session text after the chat meeting is over, but the user must be prepared to type quickly in order to minimize communication lag time *during* the session. Also, the workstation requires a reliable microphone and set of speakers, or a headset, in order to conduct a clear voice over Internet protocol (VOIP) chat. A limitation of using VOIP instead of typing in a text chat window is that the user does not have a text record of the collaborative session for future reference.

Some NM limitations are: in order to bring more voice users into a single collaborative voice chat requires the use of additional hardware, such as the Cisco Multi-point Controller Unit (MCU) or the DCTS CUSeeMe Server. The capacity of a single MCU is limited; however, multiple MCU are "stackable." This requires that somewhere on the network there must be additional hardware on line. A good choice for a multiple-user voice chat server is to locate the server in a central site (i.e. with a JSOTF headquarters (HQ) or combined force special operations component command (CFSOCC) joint communications control center (JCCC)) in order to limit the number of router "hops" required to bring users into the collaborative session.

The centralized chat server technique was put into practice during OIF when a DCTS server, located at the CFSOCC HQ JCCC, was used by the JSOTF commanders to call in to the CFSOCC commander's daily update brief.

Some IWS limitations are: it must run on high-end servers that require detailed installation, high-bandwidth transmission systems, system administration and account set-up, and daily maintenance by trained personnel in order to keep it working reliably. During MC02, on-call site mangers were assigned at each major node to ensure that all facets of the IWS program were functioning as advertised. Even after the initial set-up was completed, the site managers were continually employed in some aspect of troubleshooting and/or maintenance. MC02 was largely an indoor activity where 110 Volt AC house power and commercial fiber and phone lines were the standard.

With MIRC there is no whiteboard or vox/vid capability. Experienced users of collaboration tools know that the ability to post Power Point slides and C2PC screen captures to a white-board is an important aspect of collaborative planning that greatly enhances the information sender's and receiver's ability to communicate effectively during planning and briefings.

Just like SMTP is to e-mail, so should a common tool standard be to collaborative tools. Of course there are always those who are comfortable using their own particular collaborative tool, and justify doing so. Therein lies the challenge of getting a uniform collaboration tool standard across the SOF, JTF, Service components, and DOD. Collaboration has been established as central to the way of doing military business. It has proven itself to be a time-saver, force-multiplier, and means by which to shape the battlefield in a responsive manner, while maximizing mission success and minimizing risk, friendly casualties, and fratricide. Collaboration has an unlimited potential for future service and can be expected to increase in use and scope throughout SOF and throughout DOD. Once this standardization has been accomplished, training and fielding on those tools, along with day-to-day use, must be enforced under the concept "train as you fight."

About the Authors

Maj Nash, USMC, was assigned to SOCJFCOM in July 2001 and is currently serving as the SOCJFCOM (J62) and Command Assistant Information Management Officer (IMO). He has deployed with Task Force (TF) Dagger and TF K-Bar during OEF, and TF Viking during OIF; and has also supported various exercises as a member of the SOF Joint Training Team (JTT). Maj Nash assisted in creating the JSOTF communications architecture and implementing the collaboration tools that were used throughout MC02.

SGM Ken Teske, USA, is a Ranger Infantryman currently assigned to SOCJFCOM in Norfolk, Virginia, as the trainer for operations, joint personnel recovery, and IM. Additionally, he has supported numerous exercises as a member of the SOF JTT. He served in 1st Battalion, 75th Ranger Regiment in Operation JUST CAUSE (TF Red). He also served as the TF Dagger Joint Operations Center SGM, as well as working with TF K-Bar during the early stages of OEF. Recently, he has deployed to the Combined Forces Special Operations Component Command, Naval Special Warfare Task Group-Cent, and Combined Joint Special Operation Task Force-Afghanistan in support of both OEF and OIF.

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